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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,420	09/16/2003	Isao Mochizuki	117117	1944
25944	7590	05/01/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			AMADIZ, RODNEY	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/662,420	MOCHIZUKI ET AL.	
	Examiner	Art Unit	
	Rodney Amadiz	2629	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/16/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1, 2, 4-6, 8-10, 12, 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawyer (U.S. Patent 6,762,929) in view of Olodort et al. (U.S. Patent 6,734,809).

As to **Claim 1**, Sawyer teaches an input device including a housing main body disposed at one side of the keyboard unit and formed with a hole in an upper surface ***(See Fig.1 and note display assembly 100 disposed at one side of the keyboard unit; See Fig. 11 and note housing main body 302 with a hole (314) in an upper surface)***; a flexible display which is windable so as to be housed in a rolled state in the housing main body during nonuse of the display and to be drawn upward from the housing main body through the hole during use of the display ***(See Figs. 11 and 12 and note the flexible display 304 in its rolled state and extended state)*** ; a first contact terminal formed in the flexible display ***(See Col. 3, lines 59—Col. 4, lines 8)***.

Sawyer does not teach a connector which is electrically connected with the first and second keyboard units and provided with a second contact terminal, the first contact terminal being connected with the second contact terminal of the connector when the flexible display is drawn upward from the housing main body through the hole

for use of the flexible display. Examiner cites Olodort et al. to teach a connector which is electrically connected with the first and second keyboard units and provided with a second contact terminal, the first contact terminal being connected with the second contact terminal of the connector (*Olodort et al.—See Fig. 16 and note Connector assembly 500—See also Col. 12, lines 19-38—See also Fig. 1 and note that the connection between the keyboard and the display 60*). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the connector terminal as taught by Olodort et al. into the flexible display apparatus taught by Sawyer in order to adequately transmit signals from the keyboard to any external device and to have the components act, function and look like one device (*Olodort et al. Col. 12, lines 19-38*).

Sawyer also does not teach a foldable keyboard including a first keyboard unit, a second keyboard unit, and a rotatable connecting part provided between the first and second keyboard units. Examiner cites Olodort et al. to teach a foldable keyboard including a first keyboard unit (*See Fig. 6A, Reference Number 200*), a second keyboard unit (*Reference Numbers 100 and 300*), and a rotatable connecting part provided between the first and second keyboard units (*Fig. 6C, Reference Numbers 150 and 160*), so that the first and second keyboard units are rotated to come apart from each other into an unfolded, horizontally arranged state through the connecting part for use of the keyboard (*See Fig. 6A*), while the first and second keyboard units are rotated to come close to each other into a closed, folded state through the connecting part for nonuse of the keyboard (*See Fig. 6B—Col. 9, lines 26-30*). At the time the

invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the second keyboard unit with the ability to fold as taught by Olodort et al. into the flexile display apparatus taught by Sawyer in order to provide a compact display that is easily portable.

As to **Claim 2**, the modified apparatus of Sawyer and Olodort et al. teaches the housing main body attached to one side of the first or second keyboard unit along a direction perpendicular to an axial direction of the connecting part (***See Olodort et al. Fig. 16, Note Reference Number 500 on the side of the keyboard***).

As to **Claim 4**, the modified apparatus of Sawyer and Olodort et al. teaches the housing main body constructed to be attachable and detachable with respect to the first or second keyboard unit, and the keyboard (***Note the discussion in Claim 1, wherein it is taught that both the housing main body and keyboard have connectors; therefore, providing the function to attach and detach from each other***). Sawyer however, does not teach the keyboard and flexible display in the housing main body constructed so as to communicate with each other by wireless communication. Olodort; however, teaches wireless communication through an infrared port or a radio frequency antenna (***Olodort et al.—Col. 12, lines 27-28***). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the wireless capabilities as taught by Olodort et al. in the flexible display apparatus taught by Sawyer so that the user is not restricted to sit directly in front of the screen; therefore, providing a greater range of motion for the user.

As to **Claim 5**, Sawyer teaches the flexible display to be constructed of an organic electroluminescence (EL) display (***See Col. 3, lines 35-39***).

As to **Claim 8**, all of the limitations have already been discussed with respect to the rejection of Claim 2.

As to **Claim 9**, all of the limitations have already been discussed with respect to the rejection of Claim 4.

As to **Claim 10**, all of the limitations have already been discussed with respect to the rejection of Claim 5.

As to **Claim 12**, all of the limitations have already been discussed with respect to the rejection of Claims 1 and 4.

As to **Claim 13**, all of the limitations have already been discussed with respect to the rejection of Claim 2.

As to **Claim 15**, all of the limitations have already been discussed with respect to the rejection of Claim 5.

As to **Claim 6**, most of the limitations have already been discussed with respect to the rejection of Claim 1 with the exception of a computer main body disposed at one side of the first or second keyboard unit and a housing main body disposed at one side of the computer main body. Sawyer teaches a computer main body (***See Fig. 1, Reference Number 110***) disposed at one side of the keyboard unit and a housing main body disposed at one side of the computer main body (***See all of Figure 1***).

As to **Claim 16**, all of the limitations have already been discussed with respect to the rejection of Claims 6 and 4.

3. Claims 3, 7, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawyer in view of Olodort et al. in further view of Noguchi et al.

As to **Claim 3**, Sawyer teaches the hole formed in the housing main body is a curved elongate hole having a predetermined curvature (*See Figs. 11 and 12 and note curvature of slot 314*), and a resilient thin plate is laminated to a rear side of the flexible display, the resilient thin plate being formed to provide a curved surface of a curvature equal to the predetermined curvature of the hole (*See Fig. 4 and note Reference Number 106—See Also Col. 3, lines 48-53 and Col. 4, lines 23-40*).

Sawyer as modified by Olodort et al. fail to teach the thin plate to be metallic. Examiner cites Noguchi et al. to teach the rear surface of a display device to be made elastic and metal (*See Fig. 2, Reference Number 11*). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the elastic metal plate as taught by Noguchi et al. into the device taught by Sawyer and Olodort et al. so that the display would absorb any stress provided to the display device (*Noguchi et al.—Col. 9, lines 23-27*).

As to **Claim 7**, all of the limitations have already been discussed with respect to the rejection of Claims 1 and 3.

As to **Claim 11**, all of the limitations have already been discussed with respect to the rejection of Claims 6 and 3.

As to **Claim 14**, all of the limitations have already been discussed with respect to the rejection of Claim 3.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.A.

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4/14/06
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